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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,397	11/12/2003	Jay Wallace	071469-0306776	4401

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EXAMINER	
MOORE, KARLA A	

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/705,397	WALLACE ET AL.	
	Examiner	Art Unit	
	Karla Moore	1763	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0159780 A1 to Carpenter et al. in view of U.S. Patent No. 6,814,813 to Dando et al.

4. Carpenter et al. disclose a dual chamber apparatus in Figures 1-4 substantially as claimed and comprising: a first chamber (12); a second chamber (14) which is configured to be coupled to said first chamber at an interface, each of said first chamber and said second chamber having a transfer opening (55) located at said interface; a multi-part interface plate (40 and 64), said interface plate comprising a flange portion (64) abutting said second chamber and a frontal portion (40) extending outwardly from said flange portion; and an insulating plate (18; paragraphs 24 and 25) located on one of said first chamber and second chamber at said interface and configured to have a low thermal conductivity; wherein said first chamber and said second chamber can be independently controlled at different temperatures when said first chamber and said second chamber are coupled together (paragraph 8), wherein when said first and second chambers are coupled to one another, said insulating plate surrounds said frontal portion and is disposed adjacent to said flange portion, and wherein said interface plate established a continuous

heat path from said second chamber to said first chamber. Carpenter also discloses the use contact members (intervening structures) at the faces of the first or second chamber to separate them from their connecting structure(s) (paragraph 25).

5. However, although well known in the art, Carpenter et al. fail to explicitly teach a gate valve assembly disposed in said first chamber, sealing said first chamber from said second chamber and wherein said interface plate establishes a continuous heat path from said second chamber to said gate valve assembly.

6. Dando et al. disclose the use of gate valves in both of adjacent first chamber and second chambers for the purpose of opening and closing a passageway between the first and second chambers (abstract and column 4, rows 13-16 and 29-43). Further, using a gate valve assembly as disclosed in Dando et al. in Carpenter et al. would provide for a continuous heat path from said second chamber to said gate valve assembly.

7. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided gate valves at one or both of the first and second chambers in Carpenter et al. in order to open and close the connecting passageway between them as taught by Dando et al.

8. With respect to claims 2 and 3, the apparatus further comprises: at least one chamber aligning and/or fastening device (alignment pins, bolts, or other mounting devices, not illustrated; paragraph 26) on one of said first chamber and said second chamber; and at least chamber fastening hole (30) corresponding to each said at least one chamber fastening device on the other of said first chamber and said second chamber.

9. With respect to claim 4, which is drawn to intended uses of each of the first and second chambers, the courts have ruled that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). The courts have also ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte

Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). In claim 4, there are no structural limitations, only intended use limitations.

10. With respect to claim 5, said insulating pate is located on said second chamber (paragraph 25).

11. With respect to claim 6, said first chamber and said second chamber are essentially evacuated and a seal created between said first chamber and said second chamber is a vacuum seal (see paragraphs 2-4 and 32).

12. With respect to claim 7, said insulating plate is located on said first chamber (paragraph 25).

13. With respect to claim 10, it would have been obvious to one of ordinary skill in the art to provide the contact members with a size and shape that enabled the disclosed thermal objectives and not worked against them. Too large of a structure would offset the thermal objectives presented in the disclosure of the prior art. The courts have ruled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

14. With respect to claim 11, Carpenter et al. disclose a method for manufacturing a dual chamber system in Figures 1-4 and the accompanying text substantially as claimed and comprising a first chamber (12) and a second chamber (14), the method comprising: coupling an insulating plate (18; paragraphs 24 and 25) around a transfer opening (55) of one of said first chamber and said second chamber; coupling a multi-part interface plate (40 and 64), said interface plate comprising a flange portion (64) abutting said second chamber and a frontal portion (40) extending outwardly from said flange portion, wherein when said first and second chambers are coupled to one another, said insulating plate surrounds said frontal portion and is disposed adjacent to said flange portion, and wherein said interface plate established a continuous heat path from said second chamber to said first chamber; aligning said first chamber with said second chamber at an interface (see Figures 1 and 4, paragraph 25); coupling said first chamber to said second chamber (paragraph 26); forming a vacuum seal between said first chamber and said second chamber (see paragraphs 2-4 and 32)); and controlling a temperature within said first chamber and said second chamber independently when said first chamber and said second chamber are coupled

together (paragraph 5, temperature in a processing chamber/second chamber is controlled by providing a heat source, temperature in a transfer chamber/first chamber is controlled by using the insulating plate).

15. However, although well known in the art, Carpenter et al. fail to explicitly teach a gate valve assembly disposed in said first chamber, sealing said first chamber from said second chamber and wherein said interface plate establishes a continuous heat path from said second chamber to said gate valve assembly.

16. Dando et al. disclose the use of gate valves in both of adjacent first chamber and second chambers for the purpose of opening and closing a passageway between the first and second chambers (abstract and column 4, rows 13-16 and 29-43). Further, using a gate valve assembly as disclosed in Dando et al. in Carpenter et al. would provide for a continuous heat path from said second chamber to said gate valve assembly.

17. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided gate valves at one or both of the first and second chambers in Carpenter et al. in order to open and close the connecting passageway between them as taught by Dando et al.

18. With respect to claim 12, the method further comprises: separating said first chamber from said second chamber by a predetermined distance (as provided by the insulating and interface plates).

19. With respect to claim 13, Carpenter et al. and Dando et al. disclose the apparatus substantially as claimed and as described above with respect to claims 1-7 and 10.

20. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter et al. and Dando et al. as applied to claims 1-7 and 10-13 above, and further in view of U.S. Patent No. 6,469,780 to McDermott et al.

21. Carpenter et al. and Dando et al. disclose the invention substantially as claimed and as described above.

22. However, while Carpenter et al. do teach that the material of the insulating plate may be made from various thermally insulative materials (paragraph 24), which would include polytetrafluoroethylene,

Carpenter et al. fail to explicitly and specifically teach the insulating plate is constructed of polytetrafluoroethylene. The only material specifically mentioned is Delrin 111P.

23. McDermott et al. teach the use of themally insulative plastic materials such as polytetrafluoroethylene and Delrin or other suitable insulating materials as materials for thermally insulating, connecting structures where thermal isolation must be provided and the connected components must be maintained at different operating temperatures (column 6, rows 47-54).

24. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a thermally insulating material such as Delrin or polytetrafluoroethylene as a construction material for the insulating plate in Carpenter et al. and Dando et al. in order to provide thermal isolation and the ability to maintain the components at different operating temperatures as taught by McDermott et al.

Allowable Subject Matter

25. The indication of allowable subject matter is withdrawn in view of the newly relied upon passages of Carpenter et al. Rejections based on the newly relied upon passages are above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karla Moore
Primary Examiner
Art Unit 1763
2 May 2006